

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1-14. (cancelled)
15. (new) An exhaust gas aftertreatment device for a motor vehicle, comprising

a reforming unit (1) that is designed to generate hydrogen by at least one of steam reforming and partial oxidation of hydrocarbons, wherein the reforming unit (1) is arranged directly in a main exhaust gas stream (4) of an internal combustion engine, and wherein steam and residual oxygen which are required for reforming are derived from exhaust gas;

an NO<sub>x</sub> storage catalytic converter (2) that is arranged in the main exhaust gas stream (4) downstream of the reforming unit (1), wherein the NO<sub>x</sub> storage catalytic converter (2) is designed to remove NO<sub>x</sub> from lean exhaust gas by storing the NO<sub>x</sub> as the lean exhaust gas flows through the NO<sub>x</sub> storage catalytic converter and to generate N<sub>2</sub> by reducing the stored NO<sub>x</sub> when reducing exhaust gas flows through the NO<sub>x</sub> storage catalytic converter; and

an SCR catalytic converter (3) that is arranged in the main exhaust gas stream (4) downstream of the NO<sub>x</sub> storage catalytic converter (2), wherein the

SCR catalytic converter (3) is designed to reduce NO<sub>x</sub> contained in the exhaust gas using NH<sub>3</sub> that has been generated by the NO<sub>x</sub> storage catalytic converter.

16. (new) The exhaust gas aftertreatment device as claimed in claim 15, further comprising an oxidation catalytic converter that is arranged downstream of the SCR catalytic converter (3).

17. (new) The exhaust gas aftertreatment device as claimed in claim 16, further comprising a three-way catalytic converter (7) that is arranged immediately downstream of the reforming unit.

18. (new) The exhaust gas aftertreatment device as claimed in claim 15, further comprising a three-way catalytic converter (7) that is arranged immediately downstream of the reforming unit.

19. (new) The exhaust gas aftertreatment device as claimed in claim 15, wherein the reforming unit (1) is designed as a catalytically active particulate filter.

20. (new) An exhaust gas aftertreatment device for a motor vehicle, comprising

a reforming unit (1) that is designed to generate hydrogen by at least one of steam reforming and partial oxidation of hydrocarbons, wherein the reforming unit (1) is arranged directly in a main exhaust gas stream (4) of an internal

combustion engine, and wherein steam and residual oxygen which are required for reforming are derived from exhaust gas;

an NO<sub>x</sub> storage catalytic converter (2) that is arranged in the main exhaust gas stream (4) downstream of the reforming unit (1), wherein the NO<sub>x</sub> storage catalytic converter (2) is designed to remove NO<sub>x</sub> from lean exhaust gas by storing the NO<sub>x</sub> as the lean exhaust gas flows through the NO<sub>x</sub> storage catalytic converter and to generate N<sub>2</sub> by reducing the stored NO<sub>x</sub> when reducing exhaust gas flows through the NO<sub>x</sub> storage catalytic converter; and

an SCR catalytic converter (3) that is arranged in the main exhaust gas stream (4) downstream of the reforming unit (1) but upstream of the NO<sub>x</sub> storage catalytic converter (2), wherein the SCR catalytic converter (3) is designed to reduce NO<sub>x</sub> contained in the exhaust gas using NH<sub>3</sub> that has been generated by the NO<sub>x</sub> storage catalytic converter.

21. (new) The exhaust gas aftertreatment device as claimed in claim 20, further comprising an oxidation catalytic converter that is arranged downstream of the NO<sub>x</sub> storage catalytic converter.

22. (new) The exhaust gas aftertreatment device as claimed in claim 21, further comprising a three-way catalytic converter (7) that is arranged immediately downstream of the reforming unit.

23. (new) The exhaust gas aftertreatment device as claimed in claim 20, further comprising a three-way catalytic converter (7) that is arranged immediately downstream of the reforming unit.

24. (new) The exhaust gas aftertreatment device as claimed in claim 20, wherein the reforming unit (1) is designed as a catalytically active particulate filter.

25. (new) An exhaust gas aftertreatment device for a motor vehicle, comprising

a reforming unit (1) that is designed to generate hydrogen by at least one of steam reforming and partial oxidation of hydrocarbons, wherein the reforming unit (1) is arranged directly in a main exhaust gas stream (4) of an internal combustion engine, and wherein steam and residual oxygen which are required for reforming are derived from exhaust gas; and

an exhaust gas catalytic converter, wherein the exhaust gas catalytic converter is arranged in the main exhaust gas stream (4) downstream of the reforming unit (1), wherein the exhaust gas catalytic converter includes the functions of an NO<sub>x</sub> storage catalytic converter (2) and an SCR catalytic converter (3).

26. (new) The exhaust gas aftertreatment device as claimed in claim 25, further comprising an oxidation catalytic converter that is arranged downstream of the exhaust gas catalytic converter.

27. (new) The exhaust gas aftertreatment device as claimed in claim 26, further comprising a three-way catalytic converter (7) that is arranged immediately downstream of the reforming unit.

28. (new) The exhaust gas aftertreatment device as claimed in claim 25, further comprising a three-way catalytic converter (7) that is arranged immediately downstream of the reforming unit.

29. (new) The exhaust gas aftertreatment device as claimed in claim 25, wherein the reforming unit (1) is designed as a catalytically active particulate filter.

30. (new) An exhaust gas aftertreatment device for a motor vehicle, comprising

a reforming unit (1) that is designed to generate hydrogen by at least one of steam reforming and partial oxidation of hydrocarbons, wherein the reforming unit (1) is arranged directly in a main exhaust gas stream (4) of an internal combustion engine, and wherein steam and residual oxygen which are required for reforming are derived from exhaust gas; and

a DENOX catalytic converter (8) that is arranged in the main exhaust gas stream (4) downstream of the reforming unit (1).

31. (new) The exhaust gas aftertreatment device as claimed in claim 30, wherein the reforming unit (1) is designed as a catalytically active particulate filter.

32. (new) A method for operating an exhaust gas aftertreatment device, the method comprising:

using hydrogen to reduce NO<sub>x</sub> in exhaust gas from an internal combustion engine of a motor vehicle by way of a catalytic converter;

generating the hydrogen onboard the motor vehicle by at least one of steam reforming and partial oxidation of hydrocarbons, wherein the steam and residual oxygen which are required for the reforming originates from the exhaust gas; and

carrying out the reforming by a reforming unit arranged directly in a main exhaust gas stream (4) from the internal combustion engine.

33. (new) The method as claimed in claim 32, further comprising setting the temperature of the reforming unit (1) by an air/fuel ratio and determining oxygen concentration in the exhaust gas using a wide-band lambda sensor.

34. (new) The method as claimed in claim 33, further comprising operating the reforming unit (1) at an air/fuel ratio in the range from approximately  $0.5 < \lambda < 1.0$ .

35. (new) The method as claimed in claim 34, further comprising setting a quantity of fuel which is fed to the reforming unit (1) inside the engine with a secondary injection (5) and/or by a combination of the two options.

36. (new) The method as claimed in claim 33, further comprising setting a quantity of fuel which is fed to the reforming unit (1) inside the engine with a secondary injection (5) and/or by a combination of the two options.

37. (new) The method as claimed in claim 32, further comprising setting a quantity of fuel which is fed to the reforming unit (1) inside the engine with a secondary injection (5) and/or by a combination of the two options.